

Inhalers and the Environment



Climate change is one of the key contributors to illness, death, and economic damage in Canada. Metered dose inhalers (MDIs) are responsible for up to 4% of healthcare related greenhouse gas emissions furthering climate change. MDIs are pressurized using hydrofluorocarbons (HFC liquid gas), which have up to 3,350 times greater global warming potential than carbon dioxide.

Metered Dose Inhalers (MDIs)	Dry Powder Inhalers (DPIs)	Soft Mist Inhalers (SMIs)
		
Carbon footprint equivalent to driving 170 km by car	Carbon footprint equivalent to driving 6 km by car	Carbon footprint equivalent to driving 7.5 km by car

Choosing Wisely Canada recommends:

“Don’t prescribe greenhouse gas-intensive metered-dose inhalers (MDIs) for asthma and/or COPD where an alternative inhaler with a lower carbon footprint (e.g. dry powder inhaler (DPI), soft-mist inhaler, or MDI with a low greenhouse gas potential propellant) containing medications with comparable efficacy is available, and where the patient has demonstrated adequate technique and patient preference has been considered.”

The pharmacist has assessed your adult patient prescribed an MDI for symptom control, inhaler technique, and inhaler suitability (cost, ease of use, adherence, environmental impact). If appropriate, the pharmacist has prescribed or recommended an alternative inhaler for the patient. This intervention is expected to improve inhaler adherence, symptom control, patient satisfaction, and reduce greenhouse gas emissions.

Additional resources:

[Inhalerguide.ca](https://www.inhalerguide.ca)

[The Canadian Thoracic Society’s Position Statement on Climate Change and Choice of Inhalers for Patients with Respiratory Disease](#)

Asthma Guidelines: [Canadian Thoracic Society 2021 Guideline update: Diagnosis and management of asthma in preschoolers, children and adults](#)

COPD Guidelines: [2023 Canadian Thoracic Society Guideline on Pharmacotherapy in Patients with Stable COPD](#)

[CASCADES Climate Conscious Inhaler Prescribing in Outpatient Care](#)